

50X1-HUM

CLASSIFICATION **CONFIDENTIAL**
 CENTRAL INTELLIGENCE AGENCY
 INFORMATION FROM
 FOREIGN DOCUMENTS OR RADIO BROADCASTS

COUNTRY USSR
 SUBJECT Scientific - Metallurgy, cutting tools
 HOW PUBLISHED Book
 WHERE PUBLISHED Moscow
 DATE PUBLISHED 1949
 LANGUAGE Russian

REPORT CD NO. [REDACTED]
 DATE OF INFORMATION 1949
 DATE DIST. 5 Apr 1950
 NO. OF PAGES 2
 SUPPLEMENT TO REPORT NO.

THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING OF ESPIONAGE ACT 50 U. S. C. 31 AND 32, AS AMENDED. ITS TRANSMISSION OR THE REVELATION OF ITS CONTENTS IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW. REPRODUCTION OF THIS FORM IS PROHIBITED.

THIS IS UNEVALUATED INFORMATION

SOURCE

Issledovaniya protsessa rezaniya metalloy, by Docent M. Klushin, Candidate of Technical Sciences, published by Mashgiz (State Scientific and Technical Publishing House for Machine-Building Literature, (Library of Congress No TJ 1230 .K56)).

TABLE OF CONTENTS FOR
"INVESTIGATING METAL-CUTTING PROCESSES"

In this book, the author attempts to include the best of pre-Revolutionary Russian work on the theory of the metal-cutting process and also gives an analysis of the development of this problem in the Soviet period.

The book is recommended as a textbook for teachers and students of higher technical schools and also for engineers and technicians of scientific research institutes dealing with metal-cutting problems.

TABLE OF CONTENTS

	Page
Foreword	3
Introduction	5
I. Early Investigators, Evolution of Principles of Mechanics of the Deforming Forces in the Cutting of Metals	15
Time's Investigations	15
Process of Chip Formation	15
Cutting Force and Cutting Work	22
Zvorykin's Investigations	28
Process of Chip Formation	29
System of Forces in Metal Cutting	31
Direction of Shearing in Metal Cutting	34
Force and Work Necessary for Chip Removal	35
Experimental Investigation of Cutting Force	37
Briks' Theory	44
System of Forces in Metal Cutting	45
A More Precise Statement of the Above Theory	48
Appraisal of the Theory	55

- 1 -

CLASSIFICATION		CONFIDENTIAL	
STATE	<input checked="" type="checkbox"/> NAVY	<input checked="" type="checkbox"/> NSRB	DISTRIBUTION
ARMY	<input checked="" type="checkbox"/> AIR	<input checked="" type="checkbox"/> FBI	

50X1-HUM

CONFIDENTIAL

CONFIDENTIAL

	<u>Page</u>
II. Investigation of Plastic Deformations in Metal Cutting. Transition to the Evolution of Principles of the Physics of the Metal Cutting Process	63
Ya. G. Usachev's Investigations	63
A. M. Rozenberg's Investigations	68
Direction of Deformations in the Chip and the Direction of Shearing	80
III. Examination of Cutting Process as a Plastic Compression Process	84
IV. Component Parts of Cutting Force and Work	97
V. Foundation and Evolution of Principles of High-Speed Cutting of Metals	114
VI. Leading Role of the Soviet School of Metal Cutting in World Science	145
Bibliography	161

- E N D -

- 2 -

CONFIDENTIAL

CONFIDENTIAL